



PATENT
19200-000067/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Anders BJORK et al. Conf.: 7556
Appl. No.: 10/593,156 Group: 3644
Filed: September 18, 2006 Examiner: Monica Williams
For: METHOD AND MILKING STATION FOR MILKING
ANIMALS

Docket No.: 19200-000067/US

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Alexandria, VA 22314

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RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

Sir or Madam:

In response to the Notification of Non-Compliant Appeal Brief dated May 5, 2009, Applicants respectfully submit the following comments and a Supplemental Appeal Brief in accordance with MPEP § 1205.03(B).

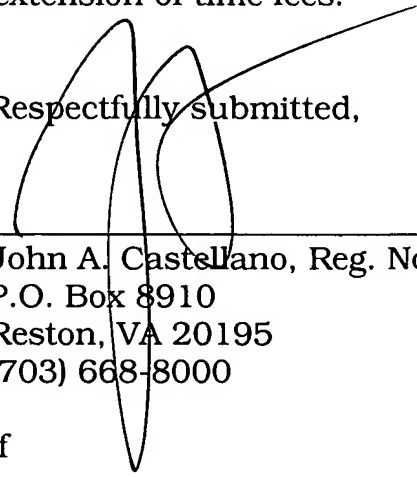
The Examiner points out two defects in the Appeal Brief in the Notification of Non-Compliant Appeal Brief: (1) a failure to present an argument under a separate heading for each argument presented on appeal and (2) incorrect claim numbering in the heading of Appendix A. Applicants submit herewith a supplemental appeal brief consolidating the rejections under § 103 into a single ground on appeal, such that each ground is now addressed under a separate heading in the arguments section. The claim numbering in the heading of Appendix A has also been corrected. Applicants respectfully note

that the Examiner is permitted to accept a brief for minor issues of non-compliance under MPEP § 1205.03, such that any further defects will hopefully not prevent entry of the brief and the Examiner's Answer to it.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

By:



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Enclosure: Supplemental Appeal Brief

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II. RELATED APPEALS AND INTERFERENCES

No related appeals or interferences are known.

III. STATUS OF CLAIMS:

Claims 1-20 are pending. Claims 1-20 currently stand rejected. Claims 1 and 14 are independent claims. The claims are rejected as follows:

1. Claims 1-4, 7, 10-11, 14-17, and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by US Pat 5,778,820 to Van der Lely et al. ("Van der Lely").
2. Claims 5-6 and 18-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Van der Lely in view of US Pat 5,769,023 to Van der Lely et al. ("Van der Lely '023").
3. Claims 8 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Van der Lely in view of US Pat 6,263,832 to Van der Berg ("Van der Berg").
4. Claims 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Van der Lely in view of US Pat 6,543,381 to Birk et al. ("Birk").

Claims 1-20 are being appealed.

IV. STATUS OF AMENDMENTS:

No amendments after the final office action of August 18, 2008 were submitted. The claims presented and argued below are in their form at the closing of prosecution.

V. SUMMARY OF CLAIMED SUBJECT MATTER:

The following explains the subject matter set forth in each claim argued on appeal and each independent claim by way of example embodiments in the specification by page and line number, and in the drawings, if any, by reference characters only to satisfy 37 C.F.R. § 41.37(c)(1)(v). This concise explanation relies on example embodiments from the specification to describe the claims; however, the claims recite subject matter not limited to these example embodiments. Independent claims 1 and 14 are the independent claims on appeal.

Claim 1

Example methods include methods of coordinating feeding, consumption, and milking of milk-producing animals. Example methods may be implemented in automated milking facilities such as the milking facility illustrated in FIG. 1. The milking facility shown in FIG. 1 allows milking animals 55 to selectively and/or singly pass through a milking station 9, where animals 55 may be milked, manually or automatically. For automatic milking, a milking machine 14 including a robotic arm 18 may automatically detect and connect one or more teat cups 19 to milking animals 55. The milking station

further includes a feeding station 21 accessible to the animal while being milked by milking machine 14. The feeding station 21 is configured to dispense feed to the milking animal 55 at a desired interval. The preamble of claim 1, a “method for milking animals in a milking station including a milking machine for milking said animals and a first feeding device for feeding said animals intermittently or continuously with feed” describes this example setting for implementing example methods and may be found in the specification as filed¹ at Page 6, line 14 through Page 7, line 26.

Example methods include permitting a milking animal to enter the milking area. This access grant may include identifying approaching animals and selectively opening one or more selection gates 3 so as to provide entry to milking machine 14. The milking animal 55 may be enticed to enter the milking station 9 with feed pre-dispensed in feeding station 21. The limitation of claim 1, “allowing a milking animal to enter said milking station” reads on this example step and may be found in the specification as filed at Page 6, lines 13-18.

When a milking animal 55 is in a milking station 9, feed is dispensed through feeding station 21 accessible to the animal during milking. Feeding may be continuous or intermittent, depending on the dispensing rate, the animal's consumption rate, animal daily needs, etc. The consumption entices and calms the milking animal 55, improving milking results by reducing

¹ Note that the page and line numbering of the specification as filed on September 18, 2006 is cited herein and does not necessarily correspond to the specification as published.

animal movement and stimulating milk release. The limitation of claim 1, “feeding said milking animal in said milking station intermittently or continuously with feed by means of said first feeding device” reads on this example step and may be found in the specification as filed at Page 7, line 16 through Page 8, line 2.

When a milking animal 55 is in a milking station 9, the animal is milked by a milking machine 14. A handling device 17 may sense and guide the animal into a proper position in relation to the milking machine 14. A robotic arm 18 may extend and apply teat cups 19 to the milking animal 55. The animal is milked and milk collected in an end unit 15. The limitation of claim 1, “milking said milking animal in said milking station by means of said milking machine” reads on this example step and may be found in the specification as filed at Page 6, line 24 through page 7, line 6.

In order to encourage a milking animal 55 to exit milking machine 14 exactly when milking has ended and increase animal throughput, feeding station 21 stops dispensing feed at a threshold point during milking, but before milking has finished. The feeding termination process is illustrated in FIG. 2, elements 63-65. Because feed dispensation is terminated during milking, the milking animal continues consuming the dispensed feed until a point closer to milking completion but runs out of feed before milking is complete. The lack of feed as milking terminates encourages the animal to move out of milking machine 14, and the animal learns to exit the machine promptly, allowing milking of the next animal to commence faster. The limitation of claim 1,

“terminating said feeding of said milking animal at a non-final stage of said milking in order to secure that said milking animal has terminated to consume the feed when said milking is finished” reads on this example step and may be found in the specification as filed at Page 8, line 13 through Page 10, line 9.

Claim 14

Example embodiments include milking facilities capable of executing and configured to execute the above-described example methods of coordinating feeding, consumption, and milking of milk-producing animals. Example embodiment milking facilities are illustrated in FIG. 1. The milking facility shown in FIG. 1 is configured to allow milking animals 55 to selectively and/or singly pass through a milking station 9, where animals 55 may be milked, manually or automatically. One or more selection gates 3 may selectively opened so as to provide entry to milking machine 14. The limitation of claim 14, “an entry provided for allowing a milking animal to enter said milking station” reads on these example embodiments and may be found in the specification as filed at Page 6, lines 13-18.

Example embodiments include a milking machine 14. Example machines may include a robotic arm 18 configured to automatically detect and connect one or more teat cups 19 to milking animals 55. The robot may collect milk from the animals via teach cups 19 and collect the milk in an end device 15 connected to the teat cups through milk lines 16. The limitation of claim 14, “a milking machine provided for milking said milking animal” reads on

these example embodiments and may be found in the specification as filed at Page 6, line 24 through page 7, line 6.

Example embodiment milking stations further include a feeding station 21 accessible to the animal while being milked by milking machine 14. The feeding station 21 is configured to dispense feed to the milking animal 55 at a desired interval. In order to encourage a milking animal 55 to exit milking machine 14 exactly when milking has ended, feeding station 21 is configured to stop dispensing feed at a threshold point during milking, but before milking has finished. An example feeding termination configuration is illustrated in FIG. 2, elements 63-65. Because feeding station 21 is configured to terminate feed dispensation during milking, the milking animal 55 may continue consuming the dispensed feed until a point closer to milking completion but runs out of feed before milking is complete. The lack of feed when milking terminates encourages the animal to move out of milking machine 14, and the animal learns to exit the machine promptly, allowing milking of the next animal to commence faster thereby increasing milk output. The limitation of claim 14, "a first feeding device provided for feeding said milking animal intermittently or continuously with feed, wherein - said first feeding device is provided for terminating said feeding of said milking animal at a non-final stage of said milking in order to secure that said milking animal has terminated to consume the feed when said milking is finished" reads on these example embodiments and may be found in the specification as filed at Page 8, line 13 through Page 10, line 9.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL:

Appellant seeks the Board's review of the following rejections:

1. The rejection to claims 1-4, 7, 10-11, 14-17, and 20 under 35 U.S.C. § 102(b) as being anticipated by US Pat 5,778,820 to Van der Lely et al. ("Van der Lely").
2. The rejection to claims 5-6, 8, 9, 12, 13, and 18-19 under 35 U.S.C. § 103(a) as being unpatentable over Van der Lely in view of US Pat 5,769,023 to Van der Lely et al. ("Van der Lely '023"), Van der Lely in view of US Pat 6,263,832 to Van der Berg ("Van der Berg"), or Van der Lely in view of US Pat 6,543,381 to Birk et al. ("Birk").

Claims 1-20 rise and fall together.

VII. ARGUMENTS:

A. CLAIMS 1-4, 7, 10-11, 14-17, and 20 ARE NOT ANTICIPATED BY VAN DER LELY UNDER § 102(b).

With regard to claims 1 and 14, the Examiner alleged throughout prosecution that Van der Lely discloses each and every limitation of these claims, including "terminating said feeding of said milking animal at a non-final stage of said milking in order to secure that said milking animal has terminated to consume the feed when said milking is finished" and machines

adapted to perform this function. See Final OA, pp. 2, 6-7. Applicants respectfully submit and argue below that Van der Lely does not, under any interpretation of the claims and Van der Lely, disclose these limitations.

1. Principles of Law

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631 (Fed. Cir. 1987). When determining the content of the claim elements at prosecution, claims are given "their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art." Phillips v. AWH Corp, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (internal quotations omitted). The Board of Patent Appeals and Interferences has plenary review of issues of anticipation and claim scope underlying the appealed rejections. 35 U.S.C. § 6(b).

2. Van der Lely does not disclose any distinction between feeding and consumption or the recited timing of the actions relative to milking.

Claim 1 recites, *inter alia*, "**terminating said feeding** of said milking animal at a non-final stage of said milking in order to secure that said milking animal has **terminated to consume the feed** when said **milking is finished**." The claim recites three separate actions – feeding, consumption, and milking – occurring at different times relative to each other. The use of different terms

for each action and different times for each action reasonably indicates that the feeding, consumption, and milking are distinct. Further, the recited timing of the distinct actions requires: 1) the consumption “has terminated” at milking completion; and 2) the feeding is ended even earlier than the consumption, at a non-final stage of milking, so as to logically ensure that the first requirement is met. Thus, any reference applied to anticipate claim 1 must, inherently or explicitly, include a separate feeding that terminates before consuming terminates, and both of these actions must terminate while milking is ongoing (before milking has terminated).

Van der Lely discloses a feeding period and feed dispensation that are contemporaneous and coterminous. *See, e.g.*, Van der Lely, Abstract (“fodder is distributed at least substantially uniformly over the actual feeding period so dispensing of fodder and the feeding period ends approximately at the same time that the milking operation ends”); Col. 1, ll. 54-56; Col. 2, ll. 20-35. Nothing in Van der Lely indicates that the feeding period is actual consumption; rather, Van der Lely separately addresses consumption (and eating). *See* Van der Lely, Col. 3, ll. 51-54; Col. 6, ll. 1-7. Thus, where Van der Lely discusses feed dispensation and feeding period, it is referring to the event of dispensing feed and the time period for doing so, not the recited consuming.

Further, even if a feeding period and feed dispensation could be interpreted as consumption and feeding, Van der Lely teaches that these actions are simultaneous with the termination of milking, such that the recited

dispensation termination before consumption termination, let alone before milking termination, is impossible. See Van der Lely, Abstract (“fodder is distributed at least substantially uniformly over the actual feeding period so **dispensing of fodder and the feeding period ends approximately at the same time that the milking operation ends**”). Worse, Van der Lely discusses feeding continuing through milking termination, such that **consumption would extend beyond milking** and could never terminate during milking. See Van der Lely, Col. 1, ll. 56-61; Col. 6, ll. 46-49. Van der Lely contemplates the specific situation where the feeding period does not finish until after milking is completed. See Van der Lely, Col. 2, ll. 6-15 (“if the feeding period has not yet elapsed while the . . . milking . . . has already been finished.”). This is not a mere alternative embodiment in Van der Lely; it reflects that Van der Lely dispenses fodder (to say nothing of actual consumption) either until or through milking termination. This is forbidden by the plain language of claim 1, and thus Van der Lely does not meet the above-quoted element of that claim.

Because Van der Lely does not disclose or fairly teach the separate feeding and consumption timings of claim 1, Van der Lely cannot anticipate claim 1 under § 102. Claim 14 recites apparatuses configured with similarly unique timing elements over Van der Lely as discussed above with respect to claim 1. Thus, where the Examiner applies identical reasoning to both claims 1 and 14, claim 14 is equally allowable over Van der Lely. Claims 2-4, 7-8, 10-11, 15-17 and 20 are allowable at least for depending from an allowable base

claim. Reversal of the rejection to claims 1-4, 7-8, 10-11, 14-17 and 20 under 35 U.S.C. § 102(b) is respectfully requested.

**B. CLAIMS 5, 6, 8, 9, 12, 13, 18, AND 19 ARE NOT OBVIOUS
OVER VAN DER LELY IN COMBINATION WITH ANY OTHER
REFERENCE UNDER § 103(a).**

The rejections to claims 5, 6, 8, 9, 12, 13, 18, and 19 must be reversed with rejections to claims 1 and 14 under the rationale argued above. See In re Fine, 837 F.2d 1071 (Fed. Cir. 1988) ("Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious"). None of the applied secondary references - Van der Lely '023, Van der Berg, and Birk - teach, nor does the Examiner apply them for teaching, the elements of claims 1 and 14 missing from Van der Lely, discussed above. Specifically, the secondary references do not disclose a method of feeding wherein food distribution is terminated at a time such that consumption terminates before milking terminates. Because Van der Lely, alone or in combination with Van der Lely '023, Van der Berg, and Birk, fails to teach or fairly suggest each and every element of claims 1 or 14, these references cannot anticipate or render obvious claims 1 or 14. Claims 5-6, 8-9, 12-13, and 18-19 are allowable at least for depending from an allowable base claim. The Board's reversal of the rejection under 35 U.S.C. § 103(a) to claims 5-6, 8-9, 12-13, and 18-19 is respectfully requested.

C. CONCLUSION

In light of the above arguments, the Board is respectfully requested to review and reverse the rejections to claims 1-20 in connection with this application.

The Commissioner is authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 41.20(b), particularly, Appeal Brief fees.

Respectfully submitted,

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VIII. APPENDIX A - Listing of claims 1-20 on appeal:

1. A method for milking animals in a milking station including a milking machine for milking said animals and a first feeding device for feeding said animals intermittently or continuously with feed, said method comprising the steps of:

- allowing a milking animal to enter said milking station;
- feeding said milking animal in said milking station intermittently or continuously with feed by means of said first feeding device; and
- milking said milking animal in said milking station by means of said milking machine, wherein said method is characterized by the step of:
 - terminating said feeding of said milking animal at a non-final stage of said milking in order to secure that said milking animal has terminated to consume the feed when said milking is finished.

2. The method of claim 1 wherein

- said step of milking includes the further steps of cleaning the teats of said milking animal, applying teat cups to the teats of said milking animal, and drawing milk from said milking animal; and
- said non-final stage of said milking, at which said feeding of said milking animal is terminated, is related to any of said further steps of cleaning

the teats of said milking animal, applying teat cups to the teats of said milking animal, and drawing milk from said milking animal.

3. The method of claim 1 wherein said step of milking includes the step of drawing milk individually from each of the teats of said milking animal; and
- said non-final stage of said milking, at which said feeding of said milking animal is terminated, is related to said step of drawing milk individually from each of the teats of said milking animal.

4. The method of claim 3 wherein said non-final stage of said milking, at which said feeding of said milking animal is terminated, is a stage when said drawing of milk individually from the teats of said milking animal is finished for one, two or three of the teats of said milking animal.

5. The method of claim 1 wherein

- an expected milk yield is determined for said milking animal for said milking; and

- said non-final stage of said milking, at which said feeding of said milking animal is terminated, is selected as a stage of said milking, at which a selected percentage of said expected milk yield has been drawn from said milking animal.

6. The method of claim 5 wherein

- an expected milk yield is determined for each of the teats of said milking animal for said milking; and
- said non-final stage of said milking, at which said feeding of said milking animal is terminated, is selected as a stage of said milking, at which a selected percentage of any of said expected milk yields has been drawn from said milking animal.

7. The method of claim 1 wherein

- a time left to complete said milking is determined repeatedly during said milking; and
- said non-final stage of said milking, at which said feeding of said milking animal is terminated, is selected as a stage of said milking, at which a selected time is left to complete said milking.

8. The method of claim 7 wherein said time left to complete said milking, which is determined repeatedly during said milking, is calculated each time based on an expected milk yield for said milking animal for said milking, and the milk yield, which has been drawn from said milking animal.

9. The method of claim 1 wherein

- said milking station includes an exit space that have to be passed by said animals while leaving said milking station, said exit space being provided with a second feeding device for feeding said animals intermittently or continuously with feed; and said method comprises the further steps of:

- allowing said milking animal to enter said exit space after the milking of said milking animal has been finished;

- feeding said milking animal intermittently or continuously with feed in said exit space by means of said second feeding device;

- allowing a further milking animal to enter said milking station;

- milking said further milking animal in said milking station by means of said milking machine; and

- terminating said feeding of said milking animal in said exit space at a non-final stage of the milking of said further milking animal in order to secure that said milking animal in said exit space has terminated to consume the feed when the milking of said further milking animal is finished.

10. The method of claim 1 wherein said method is performed individually for each milking animal allowed to enter said milking station.

11. The method of claim 1 wherein

- said milking station is an automated milking system, said milking machine is an automatic milking machine provided for automatically milking said animals, and said first feeding device is an automatic feeding device provided for automatically feeding said animals intermittently or continuously with feed; and

- said method is performed automatically.

12. A computer program product loadable into the internal memory of a computer comprising software code portions for initiating the method of claim 1 when said product is run on said computer.

13. A computerized system for controlling and monitoring a milking station, said computerized system being provided with the computer program product of claim 12.

14. A milking station for milking animals including:

- an entry provided for allowing a milking animal to enter said milking station;

- a milking machine provided for milking said milking animal; and

- a first feeding device provided for feeding said milking animal intermittently or continuously with feed, wherein
- said first feeding device is provided for terminating said feeding of said milking animal at a non-final stage of said milking in order to secure that said milking animal has terminated to consume the feed when said milking is finished.

15. The milking station of claim 14 comprising a cleaning device provided for cleaning the teats of said milking animal, a device provided for applying teat cups to the teats of said milking animal, and a device provided for drawing milk from said milking animal; and

- said first feeding device is provided for terminating said feeding of said milking animal at a non-final stage of said milking, which depends on actions performed by said cleaning device, said device provided for applying teat cups to the teats of said milking animal, and said device provided for drawing milk from said milking animal.

16. The milking station of claim 14 wherein said milking machine is provided for drawing milk individually from each of the teats of said milking animal; and

- said first feeding device is provided for terminating said feeding of said milking animal at a non-final stage of said milking, which depends on actions performed by said milking machine.

17. The milking station of claim 16 wherein said non-final stage of said milking, at which said feeding of said milking animal is terminated, is a stage when said drawing of milk individually from the teats of said milking animal is finished for one, two or three of the teats of said milking animal.

18. The milking station of claim 14 wherein said first feeding device is provided for terminating said feeding of said milking animal at a non-final stage of said milking, which is a stage of said milking, at which a selected percentage of an expected milk yield has been drawn from said milking animal.

19. The milking station of claim 18 wherein said first feeding device is provided for terminating said feeding of said milking animal at a non-final stage of said milking, which is a stage of said milking, at which a selected percentage of an expected milk yield from a single teat of said milking animal has been drawn from said teat of said milking animal.

20. The milking station of claim 14 wherein said milking station is an automated milking system; said milking machine is an automatic milking machine provided for automatically milking said animals; and said first feeding device is an automatic feeding device provided for automatically feeding said animals intermittently or continuously with feed, and for automatically terminating said feeding of said milking animal at a non-final stage of said milking.

**IX. APPENDIX B – EVIDENCE SUBMITTED UNDER CFR 1.130, 1.131,
OR 1.132**

None.

**X. APPENDIX C – DECISIONS RENDERED BY THE COURT OR THE
BOARD IN RELATED APPEALS AND INTERFERENCES SECTION**

None.